



توصيف برنامج بكالوريوس العلوم الطبية البيطرية كلية الطب البيطري – جامعة بنها

اللائحة الجديدة المعتمدة ٢٠١٧

Program Specifications Faculty of Veterinary Medicine Benha University New by-law (2017)

2019/2020



Program Specifications (2019- 2020)

Benha University

Faculty of Veterinary Medicine

A- Basic Information

1- Program Title: **Bachelor Degree in Veterinary Medical Sciences (BVMSc).**

2- Program Type: **Single.**

3- Faculty: **Faculty of Veterinary Medicine (Benha University).**

4- Departments:

- 1- Department of Anatomy and Embryology.
- 2- Department of Biochemistry.
- 3- Department of Histology.
- 4- Department of Physiology.
- 5- Department of Pharmacology.
- 6- Department of Bacteriology, Immunology and Mycology.
- 7- Department of Virology.
- 8- Department of Parasitology.
- 9- Department of Nutrition and Clinical Nutrition.
- 10- Department of Animal Wealth development.
- 11- Department of Pathology.
- 12- Department of Clinical Pathology
- 13- Department of Hygiene and Animal care
- 14- Department of Forensic Medicine and Toxicology.
- 15- Department of Aquatic Animals Diseases and Management.
- 16- Department of Food hygiene and Control.
- 17- Department of Theriogenology.
- 18- Department of Poultry and Rabbit Diseases.
- 19- Department of Zoonoses.
- 20- Department of Surgery, anesthesiology and Radiology.
- 21- Department of Animal Medicine.

5- Coordinator:

Prof. Dr. Mohamed Mohamedy Ghanem
Dean of the Faculty

6- Assistant coordinator:

Prof. Dr. Hossam Fouad Attia
Vice Dean for Education and student affairs.

7- External evaluator: Prof. Dr. Hisham Imam (professor of anatomy, Suez Canal University.)

8- Last date of program approval: October, 2019.

B- Professional Information

Program aims:

The aims of the program are to enable student to:

1. Demonstrate the proper application of the professional knowledge and skills with positive attitudes and behavior towards better health and productivity of livestock, poultry and aquatic resources.
2. Be committed to continuous enhancement, coping with the most recent effective and efficient performance standards of the veterinary profession, and gaining community confidence.
3. Apply research concepts and technologies in different fields of veterinary sciences.
4. Express proper evaluation capacity and uncover curiosity.
5. Consider life-long learning skills.
6. Apply international ethical and legal frame of medical practice-code
7. Show satisfactory interpersonal and communication skills confirming the sensitive role of the veterinarian in society and disseminating the awareness of maintaining animal and human health.

2- Intended Learning Outcomes (ILO's):

A: Knowledge and understanding:

After successful progression of the program, students must be able to:

- a.1-Describe the basic sciences of biology, define terminology and methodology in chemistry, the basics of biophysics and biostatistics, the basics of genetics and the basic computer science and Veterinary Terminology (English)
- a.2-Define the basics of normal behavior, management and breeding, the basic principles of veterinary economics and project management, the ways of health maintenance of domestic animals, laboratory animals, poultry, and aquatic .
- a.3-Illustrate the normal macro, and microstructure of body tissues, organs and systems of animals, the macroscopic and microscopic structure of body systems and organs of birds, and the macroscopic and microscopic structure of body systems and organs of aquatic
- a4-Describe physiological and biochemical bases of different organs functions, metabolic processes and homeostasis.

- a5- State the principle of welfare, production and health maintenance of food producing and pet animals, sporting animals, wildlife, poultry and aquatic.
- a6- Summarize the basics of nutrition and feeding strategies of healthy and diseased animals.
- a7- Describe various causes of animal diseases, their pathogenesis, macro- and microscopic pathological lesions, and laboratory diagnosis.
- a8- Enumerate the veterinary medications, uses, marketing, the impact of drug residues on human health and quality control of pharmaceutical practices.
- a9- Designate the general and specific epidemiological pattern of animal population diseases and the most effective immunization protocols.
- a10- Define different problems of the toxicology and Forensic medicine, Animal medicine, infectious disease, Theriogenology and Veterinary surgery
- a11- Determine the most appropriate diagnosis and differential diagnosis of animals, poultry and aquatic diseases.
- a12- Define the accurate measurements of veterinary quarantine.
- a13- Determine the public health importance for food hygiene of animal origin, milk and zoonotic diseases that are transmitted from animals to human.
- a14- List the basics of laws and ethical codes relevant to animals and food hygiene.
- a15- Summarize the basics of social sciences, communication, and human rights.

B. Intellectual skills:

After successful progression of the program, students must be able to:

- b1) Compare between different anatomical and histological structures and physiological function in different domestic animals, birds and aquatic.
- b2) Relate the type and composition of ration to the types of production, species and age of animal
- b3) Deal with behavioral and genetic disorders of farm animals
- b4) Correlate the clinical signs of the diseases with the biochemical changes in the body.

- b5) Choose the suitable drug, calculate the therapeutic dose and plan a treatment regimen.
- b6) Interpret laboratory results for different samples of normal and diseased animal to reach accurate diagnosis.
- b7) Differentiate between different infectious, medicinal and zoonotic diseases.
- b8) Choose the suitable anesthetic protocol and the relevant surgical intervention for diseased animal.
- b9) Choose the ideal interference for correction and treatment of infertility problems in farm animals together with choosing the ideal obstetrical maneuvers.
- b10) Interpret the quality of meat, egg, milk and their products and their fitness for consumption.
- b11) Choose the most appropriate method to manage commercial animal, poultry and aquatic farms and select the relevant biosecurity measures for prevention and control of infectious diseases.
- b12) Decide on the most suitable vaccination program for different farm animals, pet animals and poultry.
- b13) Interpret different environmental pollutants and suggest measures for their control.
- b14) Select programs of hazard analysis and critical control points (HACCP) on meat, poultry, aquatic and dairy processing plants.
- b15) Interpret the different pathological lesions and predict their sequallae and prognosis.
- B16) Utilize the information acquired in the basic sciences for development of career.

III. C. Practical and professional skills:

Upon successful completion of the program, students must be able to:

- c1- Utilize all the gained knowledge and understanding of basic sciences for clinical application by dissecting different parts of animal, preparing and staining of samples.
- c2- Restrain animals for examination and treatment using a safe; correct and humane manner.

- c3- Obtain the history of the case whether it is of an individual animal or a group of animals.
- c4- Perform clinical examination of healthy and diseased animal and collect relevant samples to identify virus, bacteria, parasites and toxins and perform pathology and lab analysis.
- c5- Manage the findings of the common clinical and laboratory diagnostic procedures to reach and adopt the most convenient therapeutic and managerial approach.
- c6- Write a report about hygiene and safety of food of animal origin for human consumption.
- c7- Implement and advice about animal, poultry and aquatic management, nutrition under conditions of health and disease, and reproductive efficiency.
- c8- Employ the recent and updated knowledge in treatment, management, and enhancement of animals, poultry and fish production through genetic control and different therapeutic options.
- c9- Conduct evidence-based problems solving in the field of veterinary practice by providing accurate diagnosis using different tools and provide relevant solutions and interference
- c10- Manage care of diseased animals and emergency by applying medicinal and surgical interventions
- c11- Use appropriate safety procedures to protect clients and co-workers from zoonotic and communicable diseases to maintain public health
- c12- Manage procedures related to food hygiene, public health issues, notifiable diseases and disposal of animal wastes.
- c13- Minimize the risk of contamination, cross infection and predisposing factors of diseases by applying hygienic and control methods

III. D: General and transferable skills:

Upon successful completion of the program, students must be able to:

- d1- Work under pressure and / or contradictory conditions.
- d2- Function in a multidisciplinary team.
- d3- Communicate appropriately verbally and non-verbally.

- d4-Organize and control tasks and resources.
- d5- Search for new information and technology as well as adopting life-long self learning.
- d6-Utilize computer and internet skills

Academic Standards:

The National Academic References Standards (NARS) for the veterinary sector of higher education in Egypt (Appendix 1) issued by the National authority for Quality Assurance and Accreditation (NAQAEE) (2009) approved by the faculty council on 13-9-2009 and university council on 2011.

1. Attributes of the Graduates of Veterinary Medicine

The graduate must be able to:

- 1.1. Demonstrate the proper application of the professional knowledge and skills with positive attitudes and behavior towards better health and productivity of livestock, poultry and aquatic resources.
- 1.2. Be committed to continuous enhancement, coping with the most recent effective and efficient performance standards of the veterinary profession, and gaining community confidence.
- 1.3. Apply research concepts and technologies in different fields of veterinary sciences.
- 1.4. Express proper evaluation capacity and uncover curiosity.
- 1.5. Consider life-long learning skills.
- 1.6. Apply international ethical and legal frame of medical practice-code
- 1.7. Show satisfactory interpersonal and communication skills confirming the sensitive role of the veterinarian in society and disseminating the awareness of maintaining animal and human health.

2. Knowledge and Understanding

Graduates of Veterinary Medical Program must acquire the following knowledge and understanding:

- 2.1. Basic sciences of biology, chemistry, biophysics, genetics, biostatistics, computer science and veterinary terminology.
- 2.2. Basics of normal behavior, management, breeding, veterinary economics and health maintenance of domestic animals, laboratory animals, poultry, and aquatic.
- 2.3. Normal macro, and micro-structure of body tissues, organs and systems of animals, birds and aquatic.
- 2.4. Physiological and biochemical bases of different organ functions, metabolic processes and homeostasis.
- 2.5. Principle of welfare, production and health maintenance of food producing and pet animals, sporting animals, wildlife, poultry and aquatic

- 2.6. Basics of nutrition and feeding practices of healthy and diseased animals.
- 2.7. Various causes of animal diseases, their pathogenesis, macro- and microscopic pathological lesions, and laboratory diagnosis.
- 2.8. Veterinary medications, uses, marketing, the impact of drug residues on human health and quality control of pharmaceutical practices.
- 2.9. General and specific epidemiological pattern of animal population diseases and the most effective immunization protocols.
- 2.10. Toxicology and forensic medicine, animal medicine, theriogenology and veterinary surgery.
- 2.11. The most appropriate diagnosis and differential diagnosis of animals, poultry and aquatic diseases
- 2.12. The accurate measurements of veterinary quarantine.
- 2.13. Public health, including food hygiene of animal origin and zoonotic diseases that are transmitted from animals to humans.
- 2.14. Basics of law and ethical codes relevant to animals and food hygiene.
- 2.15. Basics of social sciences, communication, and human rights.

3. Practical and professional skills

Graduates must attain the capacity to:

- 3.1. Employ all the gained knowledge and understanding in clinical practice in a skillful pattern.
- 3.2. Safely, correctly and humanely restrain animals for examination.
- 3.3. Obtain the history of the case whether it is of an individual animal or a group of animals.
- 3.4. Perform clinical examination of diseased cases and collect relevant samples.
- 3.5. Appropriately select and interpret findings of the common clinical and laboratory diagnostic procedures to reach and adopt the most convenient therapeutic and manage mental approach.
- 3.6. Write a report about hygiene and safety of food of animal origin for human consumption.
- 3.7. Assess and advise about animal management, nutrition under conditions of health and disease, and reproductive efficiency.
- 3.8. Skillfully and appropriately gain and use new information remain current with the emerging biomedical knowledge and therapeutic options.
- 3.9. Conduct evidence-based problem-solving of field-presented problems tasks.
- 3.10. Provide emergency care to all species of animals.
- 3.11. Utilize appropriate safety procedures to protect clients and co-workers.
- 3.12. Correctly deal with procedures related to food hygiene, public health issues, notifiable diseases and disposal of animal wastes.
- 3.13. Minimize the risk of contamination, cross infection and predisposing factors of diseases.

4. Intellectual skills

Graduates must have the ability to:

- 4.1. Foster critical thinking and scientific curiosity.

- 4.2. Assess and criticize, at the fundamental level, how data are derived.
- 4.3. Inculcate a rigorous approach to problem identification and solving.
- 4.4. Proficiently secure diagnostic reasoning, develop problem lists and differential diagnosis in order to deductively and critically reach the most appropriate solution (s) and management of the addressed clinical problems.
- 4.5. Remain committed to life – long learning and updating / upgrading their sense and clinical skills.

5: General and Transferable Skills

Graduates must have the ability to:

- 5.1. Work under pressure and / or contradictory conditions.
- 5.2. Function in a multidisciplinary team.
- 5.3. Communicate appropriately verbally and non- verbally.
- 5.4. Organize and control tasks and resources.
- 5.5. Search for new information and technology as well as adopt life–long self- learning ethics.
- 5.6. Utilize computer and internet skills.

Teaching and Learning:

The program features a variety of teaching approaches for different intended learning objectives, including:

- 1-Modified lectures
- 2-Practical sessions, and hospital clinical cases
- 3-Field visits
- 4-Seminars and project

٤- Curriculum Structure and Contents:

Duration of the program: 5 years.

Program Structure: The total hours 4545 hrs (lectures 2017 + practical 2475) and 720 hrs training as follow:

Number of hours per year:

Year	lectures	practical	Total
1 st year:	300	360	660
2 nd year	360	420	780
3 rd year	450	495	945
4 th year	450	570	1020
5 th year	510	630	1140
Totals	2070	2475	4545

Summer Training: 6 months of training distributed as follow:

	Number of hours	
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3 rd year	240 hrs	6 hrs daily/ 5days a week for 8 weeks
4 th year	240 hrs	6 hrs daily/ 5days a week for 8 weeks
5 th year	240 hrs	6 hrs daily/ 5days a week for 8 weeks
Total	720 hrs	

- **Percentage of courses forming the different components of the academic structure of the program:**

Program structure	No of hours	% of hours	Program courses
Basic sciences	165	3.63%	4 external courses in the faculty of science in the first year (2 courses in 1 st term + 2 courses in 2 nd term): Biology, Chemistry, biostatistics and biophysics
Basic Vet. sciences	1110	24.42%	Histology, Anatomy, biochemistry, physiology, behavior, animal production
Preclinical vet sciences	1410	28.38%	Genetics, Parasitology, bacteriology and immunology, virology, pharmacology, pathology, nutrition, Milk and meat hygiene
Clinical vet sciences	1860	40.92%	Internal Medicine, Infectious diseases, Forensic Medicine and toxicology, poultry diseases, Fish diseases, Hygiene, Surgery, zoonoses, theriogenology and clinical investigation
Computer and ICT	30	0.66%	Computer course
Humanities	90	1.98%	Human rights and English courses, and economy and farm management
Training	720 hrs		Clinical investigation and training provided by different departments. Field trips and veterinary convoys

Assessments:

The program depends on different measures for assessment according to the nature of courses, but written exams, practical assessment and oral exam are the main measures for assessment, in addition to the seminars, projects and quizzes.

Program Assessment Methods:

	Assessment Method	Assessment Weight
1	Final Written Exam*	50%
2	Practical Exam	٢٠%
3	Oral Exam	١٥%
4	Semester work and mid term	15%
Total		100%

* Students achieve less than 30% in the written exam is considered failed or students obtain less than 30% of both practical and oral exam is also considered failed.

Assessment of program intended learning outcomes (Assessment-ILOS matrix)

Assessment method	Program ILOs
1. Written exams (final and mid term)	Knowledge, understanding, and Intellectual skills
2. Practical exam	Practical and professional skills
3- Oral exam	Knowledge and understanding and Intellectual skills
4. Student Activity, semester work	General and transferable skills

5- Program Courses:

FIRST YEAR

Course Title	Curriculum (number of hours)				Type of exam.	Full marks	Exam's time (hours)	Course Code
	Lecture/ week	Lab/ week	Total/ week	Total/ semester				
<i>A- First Semester</i>								
Biophysics	١	2	٣	45	Written, practical & oral	100	2	(A) I 101
General chemistry (Organic, analytical and physical chemistry)	١	2	٣	45	Written, practical & oral	100	2	102(A) I
Anatomy and Embryology	2	٢	٤	60	Written, practical & oral	100	2	103(A) I
English language and Veterinary Terminology	1	٠	١	15	Written	50	1	104(A) I
Histology and cell biology	١	2	٣	45	Written, practical & oral	100	2	105(A) I
Biochemistry and molecular biology	2	٢	٤	60	Written, Practical & oral	100	2	106(A) I
General physiology	2	٢	٤	60	Written, Practical. and oral	100	2	107(A) I
Computer	1	1	2	30	Written	50	1	108(A) I
Total	11	13	24	360		700	14	
<i>B- Second Semester</i>								
Human Rights	1	٠	١	15	written	50	1	109(B) I
Biostatistics	1	1	2	30	Written, practical & oral	50	2	110(B) I
Anatomy and embryology	2	٢	٤	60	Written, Practical. and oral	100	2	111(B) II
Biology (Botany & Zoology)	١	2	٣	45	Written & Practical.	100	2	112(B) I
General Histology	١	2	٣	45	Written, Practical. and oral	100	2	113(B) II

Biochemistry and molecular biology	2	٢	٤	60	Written, Practical. and oral	100	2	114(B) I I
Physiology	١	2	٣	45	Written, Practical. and oral	100	2	115(B) I I
Total	9	11	20	300		650	13	

SECOND YEAR

Course Title	Curriculum (number of hours)				Type of exam.	Full marks	Exam's time (hours)	Course code
	Lecture/ week	Lab/ week	Total/ week	Total/ semester				
<i>A- First Semester</i>								
Animal Histology	١	2	٣	45	Written, Practical. and oral	100	2	201 (A) III
Anatomy and Embryology	2	٢	٤	60	Written, Practical. and oral	100	2	202 (A) III
Physiology	2	٢	٤	60	Written, Practical. and oral	100	2	203 (A) III
Biochemistry and molecular biology	2	٢	٤	60	Written, Practical. and oral	100	2	204 (A) III
Animal and poultry behavior and management	3	2	5	75	Written, Practical. and oral	100	2	205 (A) I
Animal and poultry production	١	2	٣	45	Written, Practical. and oral	100	2	206 (A) I
Genetics and Genetic Engineering	١	2	٣	45	Written, Practical. and oral	100	2	207 (A) I
Total	12	14	26	390		700	14	

B-Second Semester

Histology (poultry and aquatic)	2	٢	٤	60	Written, Practical. and oral	100	2	208 (B) IV
Anatomy and embryology	2	٢	٤	60	Written, Practical. and oral	100	2	209 (B) IV
Physiology	١	2	٣	45	Written, Practical. and oral	100	2	210 (B) IV
Biochemistry and molecular biology	2	٢	٤	60	Written, Practical. and oral	100	2	211 (B) IV
Animal, poultry behavior and management	2	٢	٤	60	Written, Practical. and oral	100	2	212 (B) II

Animal and poultry production	١	2	٣	45	Written, Practical. and oral	100	2	213 (B) II
Genetic and Genetic Engineering	2	2	4	60	Written, Practical. and oral	100	2	214 (B) II
Total	12	14	26	390		700	14	

THIRD YEAR

Course Title	Curriculum (number of hours)				Type of exam.	Full marks	Exam's time (hours)	Course code
	Lecture/ week	Lab/ week	Total/ week	Total/ semester				
<i>A- First Semester</i>								
Pharmacology	2	3	5	75	Written, Practical.& oral	100	2	301 (A) I
Bacteriology, Immunology and Mycology	2	3	5	75	Written, Practical. and oral	100	2	302 (A) I
Virology	2	2	4	60	Written, Practical. and oral	100	2	303 (A) I
Parasitology	3	3	6	90	Written, Practical. and oral	100	2	304 (A) I
Milk, milk products, oils, fats and eggs Hygiene and control	2	٢	٤	60	Written, Practical. and oral	100	2	305 (A) I
Animal, poultry, and aquatic feeding & malnutrition diseases	2	3	5	75	Written, Practical. and oral.	100	2	306 (A) I
Pathology (General)	2	٢	٤	60	Written, Practical. and oral	100	2	307 (A) I
Total	15	18	33	495		700	14	

B- Second Semester

Pharmacology	2	٢	٤	60	Written, Practical. and oral	100	2	308 (B) II
Bacteriology, immunology and mycology	2	٢	٤	60	Written, Practical. and oral	100	2	309 (B) II
Virology	2	٢	٤	60	Written, Practical. and oral	100	2	310 (B) II
Parasitology	2	٢	٤	60	Written, Practical.	100	2	311 (B) II

					and oral			
Milk, milk products, oils, fats and eggs Hygiene and control	2	٢	٤	60	Written, Practical. & oral	100	2	312 (B) II
Animal, poultry and aquatic feeding and malnutrition diseases	2	3	5	75	Written, Practical. and oral.	100	2	313 (B) II
Systemic pathology and oncology	2	٢	٤	60	Written, Practical. & oral	100	2	314 (B) II
Total	15	15	30	45		700	14	

FOURTH YEAR

Course Title	Curriculum (number of hours)				Type of exam.	Full marks	Exam's time (hours)	Course code
	Lecture/ week	Lab/ week	Total/ week	Total/ semester				
A- First Semester								
Surgery (General)	2	3	5	75	Written, Practical. and oral	100	2	401 (A) I
Pet Animal Medicine	2	3	5	75	Written, Practical. and oral	100	2	402 (A) I
Theriogenology (Obstetrics and pregnancy diagnosis)	2	3	5	75	Written, Practical. and oral	100	2	403 (A) I
Forensic Medicine and Veterinary Legislations	2	2	4	60	Written, Practical. and oral	100	2	404 (A) I
Pathology (bacterial and parasitic diseases and PM)	2	2	4	60	Written, Practical. and oral	100	2	405 (A) III
Clinical pathology blood diseases	2	2	4	60	Written, Practical. and oral	100	2	406 (A) I
Animal, poultry & Environmental Hygiene	2	3	5	75	Written, Practical. and oral	100	2	407 (A) I
Economics and veterinary projects Managements	2	2	4	60	Written, Practical. and oral	100	2	408 (A) I
Total	16	20	36	540		800	16	

B- Second Semester

Anesthesiology and Radiology	2	3	5	75	Written, Practical. and oral	100	3	409 (B) II
Equine Medicine	2	3	5	75	Written, Practical. and oral	100	3	410 (B) II
Theriogenology (Andrology and Diseases causing Abortion)	2	3	5	75	Written, Practical. and oral	100	3	411 (B) II
Toxicology	2	2	4	60	Written, Practical. and oral	100	3	412 (B) II
Pathology (Viral and mycotic diseases and PM)	2	2	4	60	Written, Practical. and oral	100	3	413 (B) IV
Clinical pathology (organs ad blood chemistry)	2	2	4	60	Written, Practical. and oral	100	3	414 (B) II
Animal, poultry & Environmental Hygiene	2	3	5	75	Written, Practical. and oral	100	3	415 (B) II
Total	14	18	32	480		700	14	

FIFTH YEAR

Course Title	Curriculum (Number of hours)				Type of exam.	Full marks	Exam's time (hours)	Course code
	Lecture/ week	Practical/ week	Total/ week	Total/ semester				
A- First Semester								
meat and meat products Hygiene and control	2	2	4	60	Written, Practical. and oral	100	2	501 (A) I
Theriogenology (Gynecology)	2	3	5	75	Written, Practical. & oral	100	2	502 (A) III
Small Ruminant Medicine	2	3	5	75	Written, Practical. & oral	100	2	503 (A) III
Special surgery	2	3	5	75	Written, Practical. & oral	100	2	504 (A) III
Poultry and Rabbit Viral and Bacterial Diseases	2	3	5	75	Written, Practical. & oral	100	2	505 (A) I
Zoonotic Diseases	2	2	4	60	Written, Practical. and oral	100	2	506 (A) I
Aquatic animals Management	2	2	4	60	Written, Practical. and oral	100	2	507 (A) I

Infectious Diseases (camels, equines and pet animals)	3	3	6	90	Written, Practical. and oral	100	2	508 (A) I
Total	17	21	38	570		800	16	

B- Second Semester

Meat and meat products Hygiene and control	2	2	4	60	Written, Practical. and oral	100	2	509 (B) II
Theriogenology (Artificial insemination and embryo transfer)	2	3	5	75	Written, Practical. & oral	100	2	510 (B) IV
large ruminant) Medicine	2	3	5	75	Written, Practical. & oral	100	2	511 (B) IV
Surgery (Limbs and hooves)	2	3	5	75	Written, Practical. & oral	100	2	512 (B) IV
Poultry parasitic and mycotic diseases	2	3	5	75	Written, Practical. & oral	100	2	513 (B) II
Zoonotic Diseases	2	2	4	60	Written, Practical. and oral	100	2	514 (B) II
Aquatic animal diseases	2	2	4	60	Written, Practical. and oral	100	2	515 (B) II
Infectious Diseases (Ruminants)	3	3	6	90	Written, Practical. and oral	100	2	516 (B) II
Total	17	21	38	570		800	16	

Matrix of Program ILOS with the courses

مصفوفة المعارف والمهارات المستهدفة من البرنامج التعليمي مع المقررات الدراسية

FIRST YEAR

A-First Semester

Course Title	Knowledge and understanding	Intellectual skills	Practical and professional	General transferable skills
Biophysics	a ¹	b16	c1	d ^{1,6}
General chemistry (Organic, analytical and physical chemistry)	a ¹	b16	c1	d ^{1,6}
Anatomy and Embryology	a ³	b ¹	c ¹	d2
English language and veterinary Terminology	a ¹			d ³
Histology and cell biology	a ¹	b ¹	c1	d ^{1,6}
Biochemistry and molecular biology	a ⁴	b ⁴	c ⁴	d ¹
Physiology	a ⁴	b ¹	c ⁴	d ¹
Computer	a ¹		c ¹	d ³

B- Second Semester

Course Title	Knowledge and understanding	Intellectual skills	Practical and professional	General transferable skills
Human rights	a15			d ⁶
Biostatistics	a ¹	b16	-	d ^{1,6}
Anatomy and embryology	a ³	b ¹	c1	d ^{1,2,6}
Biology (Botany & Zoology)	a ¹	B16	c1	d ^{1,6}
General Histology	a ³	b ¹	c1	d ^{1,6}

Biochemistry and molecular biology	a ⁴	b ⁴	c ⁴	d ¹
Physiology	a ⁴	b ¹	c ⁴	d ^{1,6}

SECOND YEAR

A-First semester

Course Title	Knowledge and understanding	Intellectual skills	Practical and professional	General transferable skills
Animal Histology	a ³	b ¹	c ¹	d ^{1,2}
Anatomy and Embryology	a ³	b ¹	c ¹	d ^{1,2}
Physiology	a ⁴	b ¹	c ⁴	d ^{1,2}
Biochemistry and molecular biology	a ⁴	b ⁴	c ⁴	d ^{1,2}
Animal and poultry behavior and management A	a ⁵	b ³	c ²	d ^{1,2}
Animal and poultry production	a ¹¹	b ¹¹	c ⁷	d ¹
Genetic and Genetic Engineering	a ¹	b ³	c ⁸	d ^{1,5,6}

B-Second Semester

Course Title	Knowledge and understanding	Intellectual skills	Practical and professional	General transferable skills
Histology (poultry and aquatic)	a ²	b ¹	c ¹	d ^{1,6}
Anatomy and embryology	a ³	b ¹	c ¹	d ^{1,2}
Physiology m	a ⁴	b ¹	c ⁴	d ^{1,6}
Biochemistry and molecular biology	a ⁴	b ⁴	c ⁴	d ^{1,6}
Animal and poultry behavior and management	a ⁵	b ³	c ²	d ^{1,6}
Animal and poultry behavior and management	a ⁵	b ³	c ²	d ^{1,2}
Genetic and Genetic Engineering	a ¹	b ³	c ⁸	d ^{1,6}

THIRD YEAR

A-First Semester

Course Title	Knowledge and understanding	Intellectual skills	Practical and professional	General transferable skills
Pharmacology	a ⁸	b ⁵	c ⁵	d ^{1,6}
Bacteriology, Immunology and mycology	a ^{7,9}	b6, b7	c ⁴	d ^{1,6}
Virology	a ⁷	b6, b7	C ^{4,13}	d ¹
Parasitology	a ⁷	b6	c ⁴	d ¹
Milk, milk products, oils, fats and eggs Hygiene and control	a ¹³	b ¹⁰	c ⁶	d ¹
Animal, poultry and aquatic feeding and malnutrition diseases	a ⁶	b ²	c ⁷	d ^{1,4,5,6}
General Pathology	a ⁷	b ¹⁵	c ⁴	d ¹

B- Second Semester

Course Title	Knowledge and understanding	Intellectual skills	Practical and professional	General transferable skills
Pharmacology	a ⁸	b ⁵	c ⁵	d ^{1,6}
Bacteriology, immunology and mycology	a ^{7,9}	b6, b7	c ⁴	d ^{1,6}
Virology	a ⁷	b6, b7	c ¹³	d ^{1,6}
Special Parasitology	a ⁷	b6	c ⁴	d ^{1,6}
Milk, milk products, oils, fats and eggs Hygiene and control	a ¹³	b ¹⁰	c ⁶	d ^{1,6}
Animal, poultry and aquatic feeding and malnutrition diseases	a ⁶	B ²	c ⁷	d ^{1,4,5,6}

Systemic pathology and oncology	a ⁷	b ¹⁵	c ⁴	d ^{1,6}
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FOURTH YEAR
A-First Semester

Course Title	Knowledge and understanding	Intellectual skills	Practical and professional	General transferable skills
Surgery (General)	a ¹⁰	b ⁸	c ^{3,9,10}	d ^{1,2,3,5}
Pet Animal Medicine	a ¹⁰	b ⁷	c ^{3,5,9}	d ^{1,2,3,5}
Theriogenology (obstetrics and pregnancy diagnosis)	a ¹⁰	b ⁹	c ^{7,9}	d ^{1,2,3,5}
Forensic Medicine and Veterinary Legislations	a ¹⁰	b ¹³	c ¹¹	d ^{1,2,3,5}
Pathology (bacterial and parasitic diseases and PM)	a ⁷	b ¹⁵	c ⁴	d ^{1,2,3,5}
Clinical pathology blood diseases	a ⁷	b ⁶	c ⁴	d ^{1,2,3,5}
Animal, poultry & Environmental Hygiene	a ^{12,13}	b ^{11,13}	c ¹²	d ^{1,2,3,5}
Economics and veterinary projects Managements	a ⁵	b ¹¹	c ⁷	d ^{1,2,3,5}

B- Second Semester

Course Title	Knowledge and understanding	Intellectual skills	Practical and professional	General transferable skills
Anesthesiology and Radiology	a ¹⁰	b ⁸	c ^{3,9,10}	d ^{1,2,3}
Equine Medicine	a ¹⁰	b ⁷	c ^{3,5,9}	d ^{1,2,3}
Theriogenology (Andrology and Diseases causing Abortion)	a ¹⁰	b ⁹	c ^{7,9}	d ^{1,2,3}
Toxicology	a ¹⁰	b ¹³	c ^{9,11}	d ^{1,2,3,6}
Pathology (Viral and mycotic diseases and PM)	a ⁷	b ¹⁵	c ⁴	d ^{1,2}
Clinical pathology	a ⁷	b ⁶	c ⁴	

(organs ad blood chemistry)				d ^{1,2}
Animal, poultry & Environmental Hygiene	a ^{12,13}	b ^{11,13}	c ¹²	d ^{1,2,3}

FIFTH YEAR
A-First Semester

Course Title	Knowledge and understanding	Intellectual skills	Practical and professional	General transferable skills
Meat and meat products hygiene and control	a ^{13,14}	b ¹⁰	c ¹²	d ^{1,2,3,5}
Theriogenology (Gynecology)	a ¹⁰	b ⁹	c ^{7,9}	d ^{1,2,3}
Small Ruminant Medicine	a ¹⁰	b ⁷	c ^{3,5,9}	d ^{1,2,3}
Special surgery	a ¹⁰	b ⁸	c ^{3,9,10}	d ^{1,2,3}
Poultry and Rabbit Viral and Bacterial Diseases	a ¹¹	b ¹²	c ⁷	d ^{1,2,3}
Zoonotic diseases	a ¹³	b ⁷	c ¹¹	d ^{1,2,3,6}
Aquatic animals Management	a ¹¹	b ¹¹	c ⁷	d ^{1,2,3}
Infectious Diseases (camels, equines and pet animals)	a ¹⁰	b ^{7,12}	c ^{3,5}	d ^{1,2,3}
Total				

B- Second Semester

Course Title	Knowledge and understanding	Intellectual skills	Practical and professional	General transferable skills
Meat and meat products Hygiene and control	a ¹⁴	b ^{10,14}	c ¹³	d ^{1,2,3}
Theriogenology (Artificial insemination and embryo transfer)	a ¹⁰	b ^{9,16}	c ^{7,9}	d ^{1,2,3}
large ruminant) Medicine	a ¹⁰	b ^{7,16}	c ^{3,5,9}	d ^{1,2,3}
Surgery (Limbs and hooves)	a ¹⁰	b ^{8,16}	c ^{3,9,10}	d ^{1,2,3}
Poultry parasitic and mycotic diseases	a ¹¹	b ^{12,16}	c ⁷	d ^{1,2,3}

Zoonotic Diseases	a ¹³	b ⁷	c ¹¹	d ^{1,2,3,6}
Aquatic animal diseases	a ¹¹	b ¹¹	c ⁷	d ^{1,2,3}
Infectious Diseases (Ruminants)	a ¹⁰	b ^{7,12}	c ^{3,5}	d ¹

Summer Training:

According to a definite syllabus, the students have to spend a period of six months for training in terms of 6 hours/ day. The training is divided into three main parts each part consists of eight weeks in the summer between the third and fourth years, fourth and fifth years and after the end of the fifth year, respectively.

Summer training program covers the practical, professional and intellectual skills. This training includes visits to the veterinary clinics, governmental research institutes, abattoirs, feed mills and commercial projects of animal and poultry production in addition to aquatic farms. The students will also be learned, during this training period, the field applications of biostatistics and computer skills. The training is held under the supervision of the staff members and their assistants; the faculty council determines the number of groups and arranges the schedule and program of training every year.

-The student must attend not less than 75% of the total hours for the training, or he/she will not be allowed to take the final practical and applied exams held at the end of the training.

-The student must pass the practical and applied exams of the training held by the scientific departments according to the rules of the faculty council.

-Students' evaluation at the end of the training with one of the following grades (that will be mentioned in the Graduation Certificate):

- Pass = 50% - less than 65%- Good = 65% - less than 75%
- Very good = 75% - less than 85 % - Excellent equal to or more than 85%.

- The assessment includes 50% for the attendance (should be more than 75%) and 50% for the practical exam held by the scientific department.

- The student who fails to pass the training (obtain less than 50% or decreased attendance less than 70%) have another chance to do this according to the rules of the faculty council.

-Every student must complete a research project in one of the veterinary fields before graduation during the training program that covers the practical and general skills. The student must pass his project through scientific committee and his grade must be written in the graduation certificate (Pass-Good-Very Good- Excellent).

6- Program Admission Requirements:

The students can be admitted at the veterinary Medical Science Program if they have one of the following certificates:

- 1- The National General Secondary School certificate (Science branch) with the grades stated by the central admission office.
- 2- A certain limited number of students with a Secondary School certificates from the Arab countries could also be enrolled (the percentage differs from year to year and determined by the Ministry of Higher Education).
- 3- Students with equivalent degrees like American diploma or IGCSF could be enrolled (the percentage differs from year to year and determined by the Ministry of Higher Education).
- 4- Students could be transferred from one of the equivalent national veterinary faculties to the same year if his condition is at least passed and his/her social and /or health status require this transfer.

7- Regulations for progression and program completion:

The policy of student retention and progression are determined according to the university regulations. Promotion to the next year requires that student should pass all required courses with at least PASS grade. Students failed in one or more courses can enter a second chance exam and should pass all failed courses to promote to the next year. If a student fails in one course in the second chance, he/she should remain for another year. To obtain a Bachelor Degree in veterinary medical sciences, the students should pass all courses, clinical and laboratory training, and graduation projector with one of the following grades: excellent, very good, good and pass. The final total grades of the students is the sum of the cumulative grades of all classes with adding the grade of clinical and lab training and the graduation project to the graduation certificate.

8-Program ILOs evaluation:

Method	Tools	Sample
1- Students	Questioners Student conferences	100
2- Alumni	Questioners	50
3- Stakeholders	Questioners, meetings	30
4-Internal evaluators	Reports	2
5- External Evaluators	Reports	2

مصفوفة توافق نواتج التعلم للبرنامج مع المعايير الاكاديمية القومية المرجعية NARS

Academic standards-Program ILOs Matrix

	NARS (adopted from NAQAAE)	Program ILOS
Knowledge and understanding	1. Basic sciences of biology, chemistry, biophysics, genetics, biostatics, computer science and veterinary terminology.	a.1.Describe the basic sciences of biology, chemistry, biophysics, genetics, biostatics, computer science and Veterinary Terminology (English)
	2. Basics of normal behavior, management, breeding, veterinary economics and health maintenance of domestic animals, laboratory animals, poultry, and aquatic.	a.2. Define the basics of normal behavior, management, breeding, veterinary economics and project management and health maintenance of domestic animals, laboratory animals, poultry, and aquatic.
	3. Normal macro, and micro-structure of body tissues, organs and systems of animals, birds and aquatic	a.3. Illustrate the normal macro, and microstructure of body tissues, organs and systems of animals, birds and aquatic
	4. Physiological and biochemical bases of different organ functions, metabolic processes and homeostasis.	a.4.Describe physiological and biochemical bases of different organs functions, metabolic processes and homeostasis
	5. Principle of welfare, production and health maintenance of food producing and pet animals, sporting animals, wildlife , poultry and aquatic	a.5.State the principle of welfare, production and health maintenance of food producing and pet animals, sporting animals, wildlife, poultry and aquatic
	6. Basics of nutrition and feeding practices of healthy and diseased animals	a.6.Summarized the basics of nutrition and feeding strategies of healthy and diseased animals
	7. Various causes of animal diseases, their pathogenesis, macro- and micro-scopic	a.7.Describe various causes of animal diseases, their pathogenesis, macro- and microscopic pathological lesions,

	NARS (adopted from NAQAAE)	Program ILOS
	pathological lesions, and laboratory diagnosis	and laboratory diagnosis
	8. Veterinary medications, uses, marketing, the impact of drug residues on human health and quality control of pharmaceutical practices.	a.8.Enumerate the veterinary medications, uses, marketing, the impact of drug residues on human health and quality control of pharmaceutical practices
	9. General and specific epidemiological pattern of animal population diseases and the most effective immunization protocols.	a.9. Designate the general and specific epidemiological pattern of animal population diseases and the most effective immunization protocols
	10.Toxicology and forensic medicine, animal medicine, theriogenology and veterinary surgery.	a.10. Define different problems of the toxicology and Forensic medicine, Animal medicine, infectious disease, Theriogenology and Veterinary surgery
	11.The most appropriate diagnosis and differential diagnosis of animals, poultry and aquatic diseases	a.11 Determine the most appropriate diagnosis and differential diagnosis of animals, poultry and aquatic diseases
	12.The accurate measurements of veterinary quarantine.	a.12.Define the accurate measurements of veterinary quarantine
	13. Public health, including food hygiene of animal origin and zoonotic diseases that are transmitted from animals to humans.	a.13. Determine the public health importance for food hygiene of animal origin, milk and zoonotic diseases that are transmitted from animals to human.
	14.Basics of law and ethical codes relevant to animals and food hygiene.	a.14.List the basics of laws and ethical codes relevant to animals and food hygiene
	15. Basics of social sciences, communication, and human rights.	a.15.Summarize the basics of social sciences, communication, human rights
Intellectual skills	1. Foster critical thinking and scientific curiosity.	b1) Compare between different anatomical and histological structures in different domestic animals, birds and aquatic
	2. Assess and criticize, at the fundamental level, how data are derived	b16) utilize the information acquired in the basic sciences for development of career.

	NARS (adopted from NAQAAE)	Program ILOS
	3. Inculcate a rigorous approach to problem identification and solving.	<p>b2) Formulate suitable rations for different animals according to species, age and productivity</p> <p>b7) Diagnose infectious, metabolic diseases and diseases of the different body systems and zoonotic diseases</p> <p>b9) Choose the ideal interference for correction and treatment of infertility problems in farm animals together with choosing the ideal obstetrical maneuvers</p>
	4. Proficiently secure diagnostic reasoning, develop problem lists and differential diagnosis in order to deductively and critically reach the most appropriate solution (s) and management of the addressed clinical problems	<p>b3) Manage farm animals deal with and treat vices and abnormal behavioral and genetic patterns</p> <p>b4) Correlate the clinical signs of the diseases with the biochemical changes in the body</p> <p>b5) Choose the suitable drug, calculate the therapeutic dose and plan a treatment regimen</p> <p>b6) Interpret laboratory results for different samples of normal and diseased animal to reach accurate diagnosis</p> <p>b8) Choose the suitable anesthetic protocol and the surgical technique for diseased animal</p> <p>b10) Judge the quality of meat, egg, milk and their products and their fitness for consumption.</p> <p>b11) Plan and manage commercial animal, poultry and aquatic farms and apply biosecurity measures for prevention and control of infectious diseases.</p> <p>b12) Develop a suitable vaccination program for different farm animals, birds and pets.</p> <p>b13) Interpret different environmental pollutants and suggest measures for their control.</p>

	NARS (adopted from NAQAAE)	Program ILOS
	5. Remain committed to life – long learning and updating / upgrading their biochemical sense and clinical skills.	b14) Apply and modify programs of hazard analysis and critical control points (HACCP) on meat, poultry, aquatic and dairy processing plants. b15) Diagnose and give a prognosis for different pathological lesions.
Professional and practical skills	1. Employ all the gained knowledge and understanding in clinical practice in a skillful pattern	c1- Utilize all the gained knowledge and understanding of basic sciences for clinical application by dissecting different parts of animal, preparing and staining of samples.
	2. Safely, correctly and humanely restrain animals for examination	c.2. Restrain animals for examination and treatment using a safe; correct and humane manner
	3. Obtain the history of the case whether it is of an individual animal or a group of animals	c.3. Obtain the history of the case whether it is of an individual animal or a group of animals
	4. Perform clinical examination of diseased cases and collect relevant samples	c4- Perform clinical examination of healthy and diseased animal and collect relevant samples to identify virus, bacteria, parasites and toxins and perform pathology and lab analysis.
	5. Appropriately select and interpret findings of the common clinical and laboratory diagnostic procedures to reach and adopt the most convenient therapeutic and management approach	c.5. Appropriately select and interpret findings of the common clinical and laboratory diagnostic procedures to reach and adopt the most convenient therapeutic and management approach
	6. Write a report about hygiene and safety of food of animal origin for human consumption	c.6. Write a report about hygiene and safety of food of animal origin for human consumption
	7. Assess and advise about animal management, nutrition under conditions of health and disease, and reproductive efficiency	c.7. Assess and advise about animal management, nutrition under conditions of health and disease, and reproductive efficiency
	8. Skillfully and appropriately gain and use new information	c8- Employ the recent and updated knowledge in treatment, management,

	NARS (adopted from NAQAAE)	Program ILOS
	remain current with the emerging biomedical knowledge and therapeutic options	and enhancement of animals, poultry and fish production through genetic control and different therapeutic options.
	9. Conduct evidence-based problem-solving of field-presented problems tasks	c9. Conduct evidence-based problems solving in the field of veterinary practice by providing accurate diagnosis using different tools and provide relevant solutions and interference
	10. Provide emergency care to all species of animals	c.10. Provide emergency care to all species of animals
	11. Utilize appropriate safety procedures to protect clients and co-workers	c.11. Use appropriate safety procedures to protect clients and co-workers from zoonotic and communicable diseases to maintain public health
	12. Correctly deal with procedures related to food hygiene, public health issues, notifiable diseases and disposal of animal wastes	c.12. Correctly deal with procedures related to food hygiene, public health issues, notifiable diseases and disposal of animal wastes
	13. Minimize the risk of contamination, cross infection and predisposing factors of diseases	c13- Minimize the risk of contamination, cross infection and predisposing factors of diseases by applying hygienic and control methods
General and transferable skills	1. Work under pressure and / or contradictory conditions	d.1. Work under pressure and / or contradictory conditions.
	2. Function in a multidisciplinary team	d.2. Function in a multidisciplinary team.
	3. Communicate appropriately verbally and nonverbally	d.3. Communicate appropriately verbally and non-verbally.
	4. Organize and control tasks and resources	d.4. Organize and control tasks and resources.
	5. Search for new information and technology as well as adopt life-long self learning ethics	d.5. Search for new information and technology as well as adopting life-long self learning ethics.
	6. Utilize computer and internet skills	d.6. Utilize computer and internet skills.

Teaching and learning methods – ILOS Matrix for Bachelor of Veterinary Medical Sciences (BVSC) program

Program ILOS		Teaching and learning methods	Modified Lectures	Practical sessions, and hospital cases	Field trips and visits	Seminar	Project
Knowledge and understanding	a.1. Describe the basic sciences of biology, chemistry, biophysics, genetics, biostatistics, computer science and Veterinary Terminology (English)		√				
	a.2. Define the basics of normal behavior, management, housing, and breeding, the basic principles of veterinary economics, the ways of health maintenance of domestic animals, pet animals, laboratory animals, poultry, and fish.		√				
	a.3. Illustrate the normal macro, and microstructure of body tissues, organs and systems of farm and pet animals, the macroscopic and microscopic structure of body systems and organs of birds, and the macroscopic and microscopic structure of body systems and organs of fish		√				
	a.4. Describe physiological and biochemical bases of different organs functions, metabolic processes and homeostasis		√				
	a.5. State the principle of welfare, production and health maintenance of food producing and pet animals, sporting animals, wildlife, poultry and aquatic		√				
	a6- Summarize the basics of nutrition and feeding strategies of healthy and diseased farm and pet animals.		√				
	a.7. Describe various causes of animal diseases, their pathogenesis, macro- and microscopic pathological lesions, and laboratory diagnosis		√				√
	a.8. Enumerate the veterinary medications, uses, marketing, the		√				√

Teaching and learning methods		Modified Lectures	Practical sessions, and hospital cases	Field trips and visits	Seminar	Project
Program ILOS	impact of drug residues on human health and quality control of pharmaceutical practices					
	a.9. Designate the general and specific epidemiological pattern of animal population diseases and the most effective immunization protocols	√				√
	a10- Define different problems of the toxicology and Forensic medicine, animal medicine, infectious disease, Theriogenology and Veterinary surgery, with special concentration on pet animals	√				√
	a.11 Determine the most appropriate diagnosis and differential diagnosis of animals, poultry and aquatic diseases	√				√
	a.12. Define the accurate measurements of veterinary quarantine	√				√
	a.13. Determine the public health importance for food hygiene of animal origin, milk and zoonotic diseases that are transmitted from animals to human.	√				√
	a.14. List the basics of laws and ethical codes relevant to animals and food hygiene	√				
	a.15. Summarize the basics of social sciences, communication, human rights	√				
Intellectual skills	b1) Compare between different anatomical and histological structures and physiological function in different domestic animals, birds and fish.			√		
	b2) Relate the type and composition of ration to the types of production, species and age of animal			√		
	b3) Manage behavioral and genetic disorders of farm animals			√		
	b4) Correlate the clinical signs of the diseases with the biochemical changes in			√		

Teaching and learning methods Program ILOS	Modified Lectures	Practical sessions, and hospital cases	Field trips and visits	Seminar	Project
the body.					
b5) Choose the suitable drug, calculate the therapeutic dose and plan a treatment and control.			√		
b6) Interpret laboratory results for different samples of normal and diseased animal to reach accurate diagnosis.			√		
b7) Differentiate between different infectious, non-infectious and zoonotic diseases to reach correct diagnosis and treatment.			√		
b8) Choose the suitable anesthetic protocol and the relevant surgical intervention for diseased animals.			√		
b9) Choose the ideal interference for correction and treatment of infertility problems in farm and animals together with choosing the ideal obstetrical maneuvers.			√		
b10) Interpret the quality of meat, egg, milk and their products and their fitness for consumption.			√		
b11) Choose the most appropriate method to manage commercial animal, poultry and fish farms and and select the relevant biosecurity measures for prevention and control of infectious diseases.			√		
b12) Decide on the most suitable vaccination program for different farm animals, pet animals and poultry relevant to epidemiological data.			√		
b13) Interpret different environmental pollutants and suggest measures for their control.			√		
b14) Select programs of hazard analysis and critical control points (HACCP) on meat, poultry, fish and dairy processing plants.			√		
b15) Interpret the different pathological lesions and predict their sequallae and prognosis.			√		
B16) Utilize the information acquired in the basic sciences for development of			√		√

Teaching and learning methods		Modified Lectures	Practical sessions, and hospital cases	Field trips and visits	Seminar	Project
Program ILOS						
	career.					
Practical and professional skills	c1- Utilize all the gained knowledge and understanding of basic sciences for clinical application by dissecting different parts of animal, preparing and staining of samples.		√			√
	c.2. Restrain animals for examination and treatment using a safe; correct and humane manner					
	c.3.Obtain the history of the case whether it is of an individual animal or a group of animals		√			
	c4- Perform clinical examination of healthy and diseased animal and collect relevant samples to identify virus, bacteria, parasites and toxins and perform pathology and lab analysis.		√			
	c5- Interpret the findings the common clinical and laboratory diagnostic procedures to reach and adopt the most convenient therapeutic and managemental, and vaccination approach		√			
	c.6. Write a report about hygiene and safety of food of animal origin for human consumption		√			√
	c7- Implement and advice about farm animals, pet animals, poultry and fish management, nutrition under conditions of health and disease, productive and reproductive efficiency		√			√
	c.8.Skillfully and appropriately gain and use new information to remain current with the emerging biomedical knowledge and therapeutic options		√			√
	c.9. Conduct evidence-based problem-solving of field c9- Conduct evidence-based problems solving in the field of		√			√

Teaching and learning methods		Modified Lectures	Practical sessions, and hospital cases	Field trips and visits	Seminar	Project
Program ILOS	veterinary practice by providing accurate diagnosis using different tools and provide relevant solutions and interference					
	c.10. Provide emergency care to all species of animals, specially pets		√			
	c11- Use appropriate safety procedures to protect clients and co-workers from zoonotic and communicable diseases to maintain public health		√			
	c.12. Correctly deal with procedures related to food hygiene, public health issues, notifiable diseases and disposal of animal wastes		√			
	c13- Minimize the risk of contamination, cross infection and predisposing factors of diseases by applying hygienic and control methods		√			
General and transferable skills	d1- Work under pressure and / or contradictory conditions.				√	√
	d2- Function in a multidisciplinary team.				√	√
	d3- Communicate appropriately verbally and non-verbally.				√	√
	d4- Organize and control tasks and resources.				√	√
	d5- Search for new information and technology as well as adopting life-long self learning ethics.				√	√
	d6- Utilize computer and internet skills				√	√

**Program aims – ILOS Matrix for the Bachelor of Veterinary Medical Sciences
(BVMSc)**

مصفوفة توافق أهداف البرنامج مع نواتج التعلم المستهدفة للبرنامج

Program Aims		Aim 1	Aim2	Aim 3	Aim4	Aim 5	Aim 6	Aim 7
Program ILOS								
Knowledge and understanding	A1	√						
	A2	√						
	A3	√						
	A4	√						
	A5	√						
	A6	√						
	A7	√						
	A8	√						
	A9	√						
	A10	√						
	A11	√						
	A12	√						
	A13	√						
	A14	√						
	A15	√						
Intellectual skills	B1	√		√				
	B2	√		√				
	B3	√		√				
	B4	√		√				
	B5	√		√				
	B6	√		√				
	B7	√		√				
	B8	√		√				
	B9	√		√				
	B10	√		√				
	B11	√		√				
	B12	√		√				
	B13	√		√				
	B14	√		√				√
	B15	√		√				
	B16	√		√				
Attitudes and professional skills	C1	√	√					
	C2	√	√					
	C3	√	√					
	C4	√	√					
	C5	√	√					
	C6	√	√					

Program Aims		Aim 1	Aim2	Aim 3	Aim4	Aim 5	Aim 6	Aim 7
Program ILOS								
	C7	√	√					
	C8	√	√	√				
	C9	√	√		√			
	C10	√	√					
	C11	√	√					
	C12	√	√					
	C13	√	√					
General and transferable	D1							√
	D2							√
	D3							√
	D4							√
	D5					√		√
	D6			√				√

Program ILOS-Course Matrix

مصفوفة توافق المقررات مع نواتج التعلم

المستهدفة للبرنامج

